

Appl. No. 09/702,691
Arndt, Dated Jul. 19, 2004
Reply to Office Action of Feb. 18, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

17. (previously amended) A method of calibrating a radio having a frequency source which reproduces a first signal having a first frequency by multiplying a second signal having an original frequency by a multiplier value, the method comprising:

- a) determining the original frequency
- b) utilizing the original frequency to determine a corrected multiplier value
- c) producing an output signal having an output frequency approximately equal to a desired frequency by adjusting the multiplier value to the corrected multiplier value.

18. (previously amended) A method as claimed in claim 17 wherein step a) further includes the steps of:

- a1) measuring the first frequency
- a2) dividing the first frequency by the multiplier value to obtain the original frequency.

19. (previously amended) A method as claimed in claim 17 wherein step b) includes dividing the desired frequency by the original frequency to obtain the corrected multiplier value.

20. (previously amended) A method as claimed in claim 17 further including the step of storing the original frequency in storage means.

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21. (previously amended) A method as in claim 17 wherein the first frequency is generated using a high resolution frequency synthesizer.

22. (previously amended) A method as in claim 21 wherein the second signal is provided by a crystal oscillating at the original frequency.

23. (previously amended) A method of adjusting an output frequency of a signal produced by a frequency source, said frequency source producing the signal by multiplying an input signal having an original frequency by a multiplier value, the method comprising:

- aa) measuring a preliminary frequency of the signal
- ab) adjusting the multiplier value based on a desired frequency and a measurement of the preliminary frequency to produce a corrected multiplier value
- ac) outputting a signal having an intermediate frequency based on the corrected multiplier value
- ad) repeating steps aa) to ac) to obtain a final signal with a final frequency such that a difference between the final frequency and the desired frequency is a minimum.

24. (previously amended) A method as claimed in claim 23 wherein the step ab) further includes a step chosen from the group comprising:

- ab1) incrementing the multiplier value by a preprogrammed value to obtain the corrected multiplier value if the preliminary frequency is lesser than the desired frequency
- ab2) decrementing the multiplier value by a preprogrammed value to obtain the corrected multiplier value if the preliminary frequency is greater than the desired frequency
- ab3) utilizing the multiplier value as the corrected multiplier value if the preliminary frequency is approximately equal to the desired frequency.

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25. (previously amended) A method as claimed in claim 23 further including the step of obtaining the original frequency by dividing the final frequency by the corrected multiplier value.

26. (previously amended) A method as claimed in claim 25 further including the step of storing the value of the original frequency in a storage means.

27. (previously amended) A device for adjusting an output frequency of a signal produced by a frequency source, the device comprising:

- a frequency source which produces the signal by multiplying:
 - an input signal having an input frequency and
 - a multiplier having a value
- a controller coupled to the frequency source, said controller controlling the value of the multiplier
 - a frequency measurement device coupled to the frequency source, said frequency measurement device producing measurement data relating to the output frequency of the signal

wherein the controller is coupled to receive the measurement data produced by the frequency measurement device.

28. (previously amended) A device as claimed in claim 27 wherein the frequency source is chosen from the group comprising:

- a high resolution frequency synthesizer; and
- a radio.

29. (previously amended) A device as claimed in claim 27 wherein the controller is chosen from the group comprising:

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- a general purpose multiprocessor
- a microcontroller
- a general purpose personal computer.

30. (previously amended) A device as claimed in claim 27 wherein the frequency source, the controller, and the frequency measurement device are implemented on a single application specific integrated circuit.

31. (previously amended) A device as claimed in claim 27 further including storage means for storing the input frequency.

32. (previously amended) A device as claimed in claim 27 wherein the frequency measurement device is connected at the output of the frequency source to measure the output frequency of the signal.